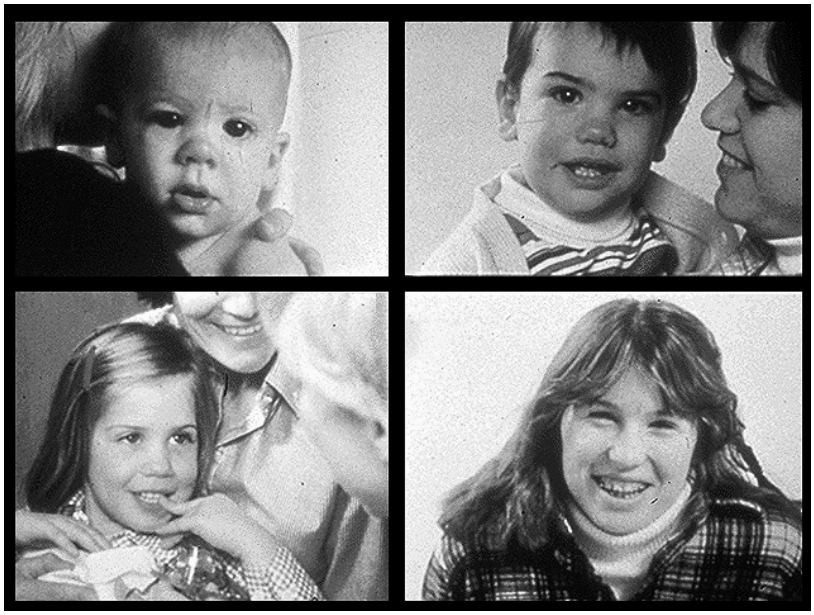
Office Preparedness



for
Pediatric Emergencies
Instructor Manual

The Georgia Emergency Medical Services for Children Program would like to acknowledge the following for the Office Preparedness for Pediatric Emergencies which was developed in collaboration with the North Carolina Office of Emergency Medical Services, the North Carolina Chapter of the American Academy of Pediatrics, the North Carolina Association of Pediatric Nurse Practitioners, the North Carolina Academy of Physician's Assistants and the North Carolina Academy of Family Practice Physicians:

North Carolina Emergency Medical Services for Children

Karen Frush, MD, Director, Pediatric Emergency Services, Assistant Clinical Professor, Department of Pediatrics, Duke University Medical Center, Durham, NC

Mike Cinaman, MD, Director, Pediatric Intensive Care, WakeMed, Raleigh, NC and Clinical Assistant Professor, University of North Carolina, Chapel Hill, NC

Bob Bailey, MA, Chief, Office of Emergency Medical Services, Raleigh, NC

Susan Hohenhaus, RN, Coordinator, Emergency Medical Services for Children, Office of Emergency Medical Services, Raleigh, NC

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Section 1 - Welcome

Introduction for Instructors

EMS-C Background in Georgia:

Federally funded initiative since 1994 with the primary focus of establishing and institutionalizing pediatric (infant to adolescents) issues within the existing emergency medical services infrastructure. Georgia's EMS-C program is based on three goals for the improvement of emergency services and reduce the morbidity and mortality for our pediatric population in Georgia.

- Strengthen the components of an emergency medical services for children to include tiered training for all levels of emergency care providers, public information and education programs targeted at injury and illness prevention and building the capacity of the EMS system to address the needs of pediatric patients.
- Establish components within the current EMS system that provides or increases services to previously underserved and impoverished areas of the state.
- Support strategic planning initiatives to assure consideration and incorporation of the special needs of children in continued system development.

This workshop entitled "Office Preparedness for Pediatric Emergencies" has been developed to address these needs. The goal of the workshop is to improve integration of primary care providers into the Georgia EMSC system by enhancing provider pediatric emergency skills and familiarity with EMS. The specific objectives are to increase the number of primary care providers a) whose pediatric resuscitation knowledge and skills are current, b) who train office personnel to identify acutely ill or injured children, c) whose offices have protocols for treatment of specific emergencies, and d) who are familiar with the role and level of training of local EMS providers.

We intend to visit as many pediatric primary care offices and clinics as possible to provide an on-site workshop for the entire office staff. Participation of local EMS contributes to the development of a local pediatric emergency care team and encourages smooth transfer of care from one team member to another. We believe that, through this effort, we can strengthen the EMSC network in Georgia and improve the emergency care for children throughout our state.

Section 2 - Instructors

Instructors: Qualifications and Descriptions

Purpose of having instructors

The primary goal of the "Office Preparedness" project is to integrate primary care providers into the Georgia Emergency Medical Services system. This means we must meet with providers individually, address individual office and clinic needs, and help providers see that they are important members of the pediatric emergency care team.

The task of reaching "all pediatric primary care providers" in the state is overwhelming; indeed, impossible for one person or even small group of people.

We hope, therefore, to establish a network of instructors across the state that can visit local practitioners and help develop the local pediatric emergency care team: primary care providers, EMTs, ED staff, and pediatric intensivists.

Instructors of the "Office Preparedness" course must have experience in pediatric emergency care; they must be individuals who have demonstrated great interest or expertise in improving the emergency care of children, i.e. PALS instructors, PLS instructors, EMS training officers, pediatric emergency physicians and nurses, and critical care physicians and nurses.

Instructor criteria

1. Demonstrate experience/expertise in pediatric emergency care.
2. Attend an instructor training session offered by Georgia Emergency Medical Services for Children.

Database

A database of instructors will be maintained at the Georgia Office of Emergency Medical Services (OEMS). To be listed in the database, an individual must meet the criteria listed above. Offices/clinics/practitioners who are interested in completing EMSC Office Preparedness training will be asked to contact Georgia OEMS, who will then coordinate setting up the course through a regional EMSC group.

Section 2 – Instructors

Instructor Roles – Individual Office Workshop

Required Personnel

1. MD or
2. RN and EMT-P
3. Local EMS

1. Identify offices or clinics you would like to visit (or the GA OEMS may contact you and request your leadership for a course at an office near you). If you identify office or clinics, contact the EMS-C Coordinator at GA OEMS at 404-679-0547 to schedule the course and for assistance with local EMS participation.

One Month Prior

1. Schedule date and time of workshop with office manager (i.e., lunchtime educational conference) and/or physician in practice. Notify the EMS-C Coordinator at the GA OEMS of planned course.
2. Inform office manager of EMS involvement
3. Arrange instructor group
4. Arrange EMS involvement (OEMS can assist with this if needed)
5. (Optional) Notify vendor/ sponsor representative of workshop

Two Weeks Prior

1. Assemble equipment: Mannequin, equipment, Provider Manuals (GA OEMS) (Optional: IO mannequin, extra IO needles)

One Week Prior

1. Confirm workshop date/ time with office manager
2. Confirm workshop time/ date with local EMS
3. Arrange for local EMS arrival at site advised by office manager

One Day Prior

1. Lead instructor (MD/ RN/ EMT-P) calls EMS to verify time of arrival
2. Lead instructor (MD/ RN/ EMT-P) calls office to verify time of mock code

Workshop Day

1. Take mannequin and other necessary equipment to workshop (Appendices) (MD/ RN/ EMT-P)

2. Gather all office staff and present overview of "Office Preparedness for Pediatric Emergencies" (MD/ RN/ EMT-P)
3. Have someone in the office complete the appropriate portion of the Mock Code Office Visit Form (Appendices)
4. Initiate mock code (see section 5)
5. Continue mock code through transfer of care to local EMS
6. Critique the mock code with entire office staff
7. Administer post course office survey (Appendices); collect them before you leave the office
8. Instructor to leave materials with office staff: provider manuals, mock code evaluation forms, sample code charting forms to be used during mock and real codes, mock code log forms and emergency drug dose sheets.

Within 1 week Post-Workshop

1. Complete post course instructor report form
2. Return the Mock Code Office Visit Form, Post Course Office Survey, Post Course Instructor Report Form to:

   EMS-C Coordinator
   Georgia OEMS
   2600 Skyland Drive
   Lower Level
   Atlanta, GA 30319
3. Send thank you notes to Office, EMS, etc. (Appendices)

1-2 Months Post-Workshop

1. OEMS will send certificate of participation in program.

Section 2 – Instructors

Instructor Roles – Multi-Practice and Group Conference

Required Personnel

1. MD or GA OEMS approved RN- Course director, lecture
2. RN, EMT (total 3-5 instructors) – Mock code, small group sessions
3. Local EMS

Two Months or More Pre-Workshop

1. Schedule 3-4 hour time period for the workshop; Notify OEMS
2. Arrange for adequate space for the workshop (lecture, mock code demonstration, small group sessions)
3. Arrange instructor group (see above)
4. Contact local EMS to arrange their participation
5. Arrange for course – participant registration

Assemble Equipment and Materials

1. Lecture – slides; secure projector
2. Mock Code – See Appendix B
3. Small group sessions
    a) Equipment Station
    b) Protocol Station – Manuals
    c) EMS/ EMSC Station – Materials available from OEMS
    d) How to Run Mock Code in Your Office and Injury Prevention Teaching – Materials available from OEMS
4. Obtain provider manuals from OEMS

Two Weeks Prior

1. Arrange workshop time schedule and disseminate to instructors and those running the meeting (if necessary)

Post-Workshop

1. Obtain complete list of names/ addresses of participants to submit to OEMS

Section 3 – Mock Codes in the Office

The Office Session

Overview

Primary care providers are often quite busy during regular business hours and have little time during which the attention of the entire office staff (clerk, nurses and physicians) can be devoted to this session. Workshops will last approximately 45 minutes to one hour and most sessions will occur during the lunch hour. Offices usually set aside 1.5 to 2 hours for lunch to allow themselves adequate time to finish seeing morning patients. When preparing the session with the office manager, try to determine when most of the staff will be available.

The workshop begins with a 5 to 10 minute introduction explaining the purpose of the course and the goal of EMSC in Georgia. A mock code follows the introduction and requires approximately 20 minutes to complete. The mock code is then reviewed both from an organizational standpoint as well as a clinical one. The session is concluded by reviewing the purpose of the session and attempting to motivate such sessions within the practice.

At the end of the workshop, leave these materials with the office: code cards, emergency drug sheets, office mock code log forms, report cards for the GA OEMS, sample code charting forms, self-evaluation forms and surveys.

Roles to be Filled

Code participants:

- Code leader (maybe lead instructor or physician in practice)
- Nurse 1 and 2
- Office receptionist / clerk
- Parent of patient

Section 3 -Mock Codes in the Office

Scenario

The scenario should include a child who is very ill or has the potential to deteriorate rapidly. (i.e. dehydration, DKA, status asthmaticus, status epilepticus, etc.). The following example of a severely dehydrated infant works well.

An infant is carried to the receptionist where the parent states that the baby has a two-day history of fever, vomiting and diarrhea. The baby has been very quiet all morning and now she has become very hard to wake up and doesn't cry at all. The parent feels that the infant is quite sick and is very worried about the baby.

- Full term baby
- No previous health problems
- Has not had any shots yet
- No known drug allergies
- On no medications
- No one on any medicine at home
- One sibling has had a cold for a week

Running the Code

The following section is a step by step table of how the code may progress. Each step is spelled out as in a stage play. This scenario is only one example and others may be substituted. Members of each office staff will likely respond quite differently to a given scenario and the moderator should provide feedback to direct the overall flow of events in the mock code.

Remember that the goal is to “practice” an emergency that might typically present to a primary care provider. The moderator should, therefore, choose a scenario in which a patient requires immediate care and intervention, but not necessarily full cardiopulmonary resuscitation.

The following scenario is that of an otherwise healthy infant who has developed severe gastroenteritis and is now in the early stages of hypovolemic shock. The patient requires immediate volume resuscitation. Although not in respiratory failure initially, the infant will develop bradycardia during the code which will easily respond to advanced airway support. No cardioactive medications will be required.

Section 3 -Mock Codes in the Office

General Code Outline

1) Infant is brought to the receptionist at the office and parent nervously presents the patients condition.
2) Office manager initiates protocol for "severe illness" (i.e., calls nurse and/ or physician to evaluate infant; perhaps leads parent to treatment area).
3) The patient is evaluated and found to be limp, lethargic, pale and tachycardic.
4) Staff should:
    a) Call for EMS (either simulated or at a prearranged number)
    b) Send someone to get more information from parent
    c) Assign appropriate roles in code
5) Infant placed on O2 and vascular access attempted. Peripheral IV access will be unsuccessful and IO attempted.
6) When IO access is attempted, the infant becomes bradycardic
7) The bradycardia responds immediately to bag/mask ventilation with return to tachycardia.
8) Fluid is given through the IO line.
9) EMS arrives 7-10 minutes into the code and begins with ABC assessment. EMS may provide any other equipment and care necessary and has not already been supplied by the office staff contingent upon their certification level.
10) Care is transferred to EMS.

Section 4 – Mock Codes Demonstration

Mock Code Demonstration

STEP BY STEP EVENTS IN MOCK CODE DEMONSTRATION				
Physician	**Nurse**	**Parent**	**Clerk**	**EMS**
		Describes history.	Listens and then brings the infant to the treatment room and calls for the nurse to evaluate. Asks for the parent to wait outside and promises to return promptly.	
	Evaluates patient swiftly and calls for the physician to see the patient immediately.			
Examines the patient quickly. Opens **airway** with jaw thrust/ chin lift. Listens and feels for **breathing.** **ASSESS** (1)				
Asks nurse for 100% oxygen by face mask	Sets up face mask			
Checks pulse distally and then centrally (**circulation**) Checks capillary refill **ASSESS** (2)				

Section 4 – Mock Codes Demonstration

STEP BY STEP EVENTS IN MOCK CODE DEMONSTRATION				
Physician	**Nurse**	**Parent**	**Clerk**	**EMS**
Instructs clerk to call EMS and ask for an Advanced Life Support Team			Leaves to call EMS	
Asks nurse 1 to place on monitoring equipment if available (pulse *ox,* cardiac)	Places patient on monitor (if available)			
			Tells team EMS is on the way.	
Instructs clerk to ask parent for any other history and to tell parent that baby is very sick and they are working on the baby. Parent will be able to come back in a few minutes.			Leaves to talk with parent.	
Reassesses infant quickly **ASSESS** (3)				
			Returns and adds additional history	
Asks clerk to record events and briefly summarize events up to this time			Begins to record	
States to nurse that the baby is in shock and needs volume immediately. Asks for 22 or 24 gauge IV's and then asks to draw up 20 cc/kg based on weight from Broselow tape.	Nurse hands physician IV and tourniquet and begins to draw up IV fluid into 60 cc syringe.			
Physician fails first peripheral IV attempt				

Section 4 – Mock Codes Demonstration

STEP BY STEP EVENTS IN MOCK CODE DEMONSTRATION				
Physician	**Nurse**	**Parent**	**Clerk**	**EMS**
States that it seems unlike will get IV as infant is so cold and poorly perfused Ask nurse for Intraosseous catheter				
Physician describes out loud the landmarks for the intraosseous line placement				
	Notes that patient's respiratory rate seems to be becoming irregular and baby's color is worse			
Stops IO and quickly evaluates the baby again – improved **ASSESS** (4)				
Asks nurse to begin bag/valve/mask ventilation with 100% oxygen	Nurse begins bagging			
Evaluates breath sounds and circulation **ASSESS** (5)			Leaves to call EMS again	
Asks nurse to continue bagging and clerk to call EMS again to make certain they are aware of the nature of this emergency				

Section 4 – Mock Codes Demonstration

STEP BY STEP EVENTS IN MOCK CODE DEMONSTRATION				
Physician	**Nurse**	**Parent**	**Clerk**	**EMS**
Place Intraosseous needle in proximal tibia Asks nurse for 5cc flush and takes over job of bagging from the nurse	Allows physician to bag and nurse flushes IO and states that there is no extravasation of fluid and line probably in place			
Asks nurse to push the fluid bolus	Nurse pushes bolus			
	Quickly reassess infant			
ASSESS (6)			Clerk directs EMS to patient	Arrives on scene
Expresses thanks for EMS' prompt arrival and quickly updates them on condition. States that after ventilation and fluid bolus patient now has good spontaneous respiration				Introduces themselves
				Places patient on monitoring equipment and assumes bagging
				Assesses ABC's
				Patient breathing, blow-by oxygen given

Section 4 – Mock Codes Demonstration

STEP BY STEP EVENTS IN MOCK CODE DEMONSTRATION				
Physician	**Nurse**	**Parent**	**Clerk**	**EMS**
Quickly assesses ABC's again **ASSESS** (7)				
Asks nurse to administer another volume bolus	Nurse delivers volume bolus			
Asks clerk to notify nearby emergency department of patient's impending arrival and to bring parent back afterward	Assists EMS		Leaves to call	Prepares patient for transport
		Enter with clerk.		
Summarizes patient's status with the parent		Asks if can ride with infant		
Calls physician in receiving hospital and gives report				Departs with patient

Section 4 -Mock Codes Demonstration

Moderator Information

Assessment 1
The patient has poor tone. The infant has minimal response to gentle touch and arouses a bit with painful stimuli. The respiratory rate is 50 to 60 breaths/minute. Respirations are labored and grunting is noted.

Assessment 2
The heart rate is 180/minute. The pulses are thready distally but easy to palpate centrally. The infant's extremities are cool but the baby is warm centrally. The capillary refill is 4 to 5 seconds and the patient is somewhat mottled. The fontanel is sunken.

Assessment 3
Essentially unchanged. Still tachypneic and tachycardic with poor perfusion and decreased level of consciousness.

Assessment 4
Heart rate 50's, occasional periods of apnea (10-15 seconds) Pulses still palpable centrally easily, cyanotic peripherally.

Assessment 5
Heart rate 180's, breathing only with bagging, no longer cyanotic although perfusion is still poor.

Assessment 6
Heart rate in 160's, peripheral pulse palpable, infant attempting to take breath on own occasionally, still limp with cool extremities.

Assessment 7
ABC's have improved; good breath sounds bilaterally, good chest rise; circulatory exam is heart-rate 150, peripheral pulses improved, extremities beginning to warm.

APPENDICES

A. Reporting form to OEMS from Instructors for Office Mock Code
B. Post Course Office Survey
C. Post Course Instructor Report Form
D. Mock Code Evaluation Form
E. Emergency Drug Reference Form
F. Code Charting Form
G. Mock Code Individual Office Log Form
H. Demonstration Requisites
I. Follow-up Sample Letters
J. Certificates for Office

EMS-C OFFICE PREPAREDNESS FOR PEDIATRIC EMERGENCIES
MOCK CODE VISIT FORM

Name of Practice _____ Date _____

Street / PO Box _____ City _____

State _____ Zip Code _____ Phone _____ Fax _____

Contact Person _____ Time Start _____ Time End _____

Type of Practice: ( ) Pediatrics ( ) Family Practice ( ) Health Clinic

Instructors: Last name _____ First Name _____

_____ _____

Instructor Candidates: **Last Name** **First Name**

_____ _____

_____ _____

_____ _____

OFFICE PARTICIPANTS	POSITION			
Name (Last, First, MI)	MD	PA	NP	RN

EMS	
EMS Agency:	
Participant Name	Level

EQUIPMENT IN OFFICE AT TIME OF VISIT

___ Oxygen Source
___ IV Fluids
___ Bag Valve and Mask
___ Broselow System
___ IV Catheters
___ Intraosseous Needle
___ CR Monitor
___ Pulse Oximeter
___ Suction Deice/Catheter
___ Intubation Equipment
___ Resuscitation Meds
___

EMSC EQUIPMENT

___ Child Mannequin
___ Broselow Bag
___ Intraosseous Simulator
___ Infant Bag
___ Infant Intubation Head

Borrowed by:_____
Location: _____
Pickup date: _____Return date:_____

Post Course Office Survey

Please complete this survey and return to the instructor

1. Please subjectively evaluate the following parts of the course:

	Poor				**Fair**		**Average**		**Good**	**Superb**
Overall	1	2	3	4	5	6	7	8	9	10
EMS Role	1	2	3	4	5	6	7	8	9	10
Instructors	1	2	3	4	5	6	7	8	9	10
Value to Office	1	2	3	4	5	6	7	8	9	10

2. What parts of the course did you find particularly valuable for your practice?

3. What parts of the course were not particularly valuable for your practice?

4. What changes in the course could be made that would make it more useful to your practice?

5. Was the time of the course at your convenience?

6. Was the time allotted adequate for the course?

Mock Code Evaluation Form

	Yes	No	Comments
Clinical			
Airway assessed initially			
Breathing assessed			
Circulation assessed			
Initial interventions			
Protocol followed for the chosen "case"			
Patient reassessed frequently			
Secondary survey			
Organization			
All supplies requested were available			
Supplies were found quickly when requested			
Broselow tape used			
Documentation form available and/or used			
Personnel knew how to use equipment properly (O2 tanks, etc.)			
Protocols available and/or used			
Communication			
Leader communicated effectively			
Events recorded accurately			
Roles were assigned			
Office staff reported to EMS			
EMS communicated needs/plans with office staff			
Other comments			

Emergency Drug Doses

DRUG	COMES AS	DOSE(WT.)	DOSE (VOL)	ADMINISTER
Epinephrine 1:10000 First Dose	0.1 mg/cc	0.01 mg/kg	0.1 cc/kg	
Epinephrine 1:1000 Subsequent/ET Dose	1 mg/cc	0.1 mg/kg	0.1 cc/kg	
Atropine	0.1 mg/cc	0.02 mg/kg	0.2 cc/kg	
Na Bicarbonate	1 meq/cc	1 meq/kg	1 cc/kg	
Dextrose 25%	0.25 gm/cc	0.5 gm/kg	2 cc/kg	
Mannitol	250 mg/cc	0.5 gm/kg	2 cc/kg	
Adenosine	3 mg/cc	0.1 mg/kg	0.03 cc/kg	
Lidocaine	40 mg/cc	1 mg/kg	0.025 cc/kg	
Narcan	0.4 mg/cc	0.1 mg/kg	0.25 cc/kg	
Defibrillation	2 Joules / kg			
	Repeat at 4 Joules / kg			
Cardioversion	0.5 Joules / kg			
			PATIENTS WEIGHT	

Code Chart

Patient_____ **Date/Time**_____

Physician_____ **Nurse**_____ **Other**_____
Nurse_____ **Nurse**_____ **Other**_____

Time	Intervention	Medication/Dose/Route	HR	RR	BP	Temp	P Ox	O2	CPR

Code Start Time	Hospital to
EMS Time Called	Physician referred to
EMS Time Arrived	Diagnosis
EMS Time Departed	
Paramedic	IV/Size/Location
IO Size/Location	ETT/Size

Mock Code Log Form

Date/Time	**Scenario (Age/Diagnosis):**	**Participants**
Evaluation Form Completed (y/n):	**Comments.**	

Date/Time	**Scenario (Age/Diagnosis):**	**Participants**
Evaluation Form Completed (y/n):	**Comments.**	

Date/Time	**Scenario (Age/Diagnosis):**	**Participants**
Evaluation Form Completed (y/n):	**Comments.**	

Date/Time	**Scenario (Age/Diagnosis):**	**Participants**
Evaluation Form Completed (y/n):	**Comments.**	

Demonstration Requisites

Participants

Moderator (Instructor)
Code Leader (Individual who would normally direct an office code – does not have to be a physician)
Nurse
Receptionist/Clerk/Secretary
Local EMS Team
Optional: Any other office members wishing to fill additional physician, nurse, or receptionist roles

Equipment (for full demo by instruction team)

1. Oxygen source
2. Self-inflating Bag
3. Broselow Tape
4. Mannequin
5. IV Catheters
6. Intraosseous catheters
7. Normal Saline IV Bags
8. Syringes (60 cc. 12 cc and 6 cc)
9. Tape
10. Gauze Pads
11. Gloves
12. Stethoscope
13. Alcohol Pads
14. Infant Face Masks
15. Blanket for Infant

Equipment (Minimum – if using office supplies)

1. Mannequin
2. Broselow Tape and Broselow Bag
3. Intraosseous catheters

Date

To: Paramedics or EMTs who participated

Thank you for participating in the mock code at (name of practice) on (date) as part of the Georgia EMSC "Office Preparedness for Pediatric Emergencies" project. Your participation in this project is key to its success as we work to establish a strong pediatric emergency care team in Georgia.

We appreciate your help and look forward to your continued involvement in EMSC activities. Please contact us if you have any questions or suggestions.

Sincerely,

(Name)
(Title)
Instructor, GA EMSC "Office Preparedness for Pediatric Emergencies"

Date

Dear (Name of Office Personnel)

Thank you for participating in the Georgia EMSC “Office Preparedness for Pediatric Emergencies” project and allowing us the opportunity to visit in your office. We hope the mock resuscitation and discussions were meaningful and that the manual is helpful to you in the future.

Please let us know if we can be of further assistance in efforts to maintain emergency readiness in your office.

Sincerely,

(Name)
(Title)
Instructor, GA EMSC “Office Preparedness for Pediatric Emergencies”

Date

To: Training Officer / Director

Thanks very much for your help in arranging EMS coverage for the recent mock code at (name of practice) as part of the Georgia EMSC "Office Preparedness for Pediatric Emergencies" project. Through this project we hope to integrate primary care providers into EMSC and to strengthen the relationship between EMS providers and pediatric primary care providers. EMS participation in this project is critical to its success and we appreciate your support.

Please contact us if you have any questions or suggestions regarding Georgia EMSC.

Sincerely,

(Name)
(Title)
Instructor, GA EMSC "Office Preparedness for Pediatric Emergencies"